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ABSTRACT

This paper provides an extensive literature review and recommendations for authentic assessment, and then provides recommendations for administrators in order to implement authentic assessment in elementary schools. A lack of comfort, with the way in which standardized tests seems to dictate what teachers teach as part of the curriculum, was a contributing factor to interest in authentic assessment that requires and enhances problem-solving skills. To promote a more complex picture of students, schools need to advocate authentic assessment by becoming familiar with the principles of sound assessment. Assessment should be used as a teacher's tool, a means to determine student outcomes and a plan for instruction. Staff development and parent and community support are essential for the implementation of authentic assessment. Some discussions with educators who are using authentic assessment emphasize these points. The key to the development of changes toward authentic assessment is collaborative decision making. (Contains 47 references and an additional bibliography of 10 sources.) (SLD)

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AUTHENTIC ASSESSMENT: AN EXTENSIVE LITERARY REVIEW AND RECOMMENDATIONS FOR ADMINISTRATORS

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INTRODUCTION

Assessment is the means of setting and maintaining educational standards by monitoring or measuring the performance of educational institutions and their individual students (Chauncey & Dobbing, 1963; Herman, 1992; Paris et al., 1992). It provides accountability, raises standards, facilitates learning, and prescribes teaching (Baker, 1981). In other words, assessment results provide feedback on instructional strengths and weaknesses and prescriptions for action at all levels of the educational system (Herman, 1992). Assessment should also collect evidence of the following: coherency of knowledge, principled problem-solving, basic skills, and metacognition (Shepard, 1989). For these reasons, assessment is a fundamental part of improving education (Paris et al., 1992; Resnick & Resnick, 1985).

However, assessment has been traditionally accomplished in forms of tests primarily in the areas of reading, spelling, and mathematics (Haney & Madaus, 1985). These forms of assessments are related in reference to poor, fair, or good performances (Haney & Madaus, 1985). In addition, these tests tend to be paper and pencil tests, such as chapter and multiple choice (Borko, Flory, & Cumbo,

1993; Haines & Izard, 1994; Kiernan & Pyne, 1993; Schulz, 1992; Wiggins, 1990). Multiple choice tests have been for placement, acquiring credentials, grading, and program evaluation (Baker, 1981).

Since multiple choice tests are cost-efficient, standardized tests are the most popular form of assessment (Resnick & Resnick, 1985; Schulz, 1992). The term "standardized" refers to a set of uniform directions, specified allotted time, common answer sheets, and scores used for cross-student or cross-school comparisons (Baker, 1981). Standardized tests are also a form of assessment that ask the same questions across different populations to permit comparisons based on a national norm or a certain criteria (Schulz, 1992). In addition, they are viewed as scientifically developed instruments that objectively, inexpensively, and reliably measure students' skills (Resnick & Resnick, 1985; Schulz, 1992). As a result, standardized tests are widely used in many schools (Schulz, 1992).

These standardized tests have dictated and structured the curriculum in schools (Haney & Madaus, 1985; Livingston, Castle, & Nation, 1989; Shepard, 1989; Shepard et al., 1994; Worthen & Spandel, 1991). Therefore, these tests are harmful to learning (Wiggins, 1990). They have corrupted the processes of teaching and

learning by reducing teaching to the preparation for testing and focusing on simple, basic skills (Haney & Madaus, 1985; Schulz, 1992; Shepard, 1989; Worthen & Spandel, 1991). Standardized tests also measure only the students' basic knowledge ignoring characteristics such as responsibility, initiative, and originality (Ebel, 1977; Schulz, 1992; Shepard, 1989). As a result, schools' curriculum do not promote higher-order thinking skills, creative endeavors, and the relevancy of learning in regard to real-life situations (Haney & Madaus, 1985; National Center for Effective Schools, 1991; Shepard, 1989).

For these reasons, a movement toward authentic assessment is emerging (Herman, Ashbacher, & Winters, 1992; Linn, Baker, & Dunbar, 1991; Paris et al., 1992; Worthen, 1993) and administrators are advocating and implementing this alternative form of assessment in their school's curriculum (Lockwood, 1991; National Center for Effective Schools, 1991; Worthen & Spandel, 1991).

The purpose of this paper was to provide an extensive literature review and recommendations on authentic assessment. The secondary purpose was to provide recommendations for administrators, as instructional leaders, in order to implement

authentic assessment in elementary schools. Lastly, an additional bibliography of other learning resources was included.

REVIEW OF RELATED LITERATURE

Throughout the decades, various methods of assessment have been utilized in the field of education. The ancient Greeks and Socrates established an intellectual form of testing in regards to educating the young (Chauncey & Dobbin, 1963; Worthen, 1993). In America, a movement toward standardized testing was introduced by Horace Mann in 1845. Mann introduced a uniform, written examination to replace the oral integration of students by schools' committees in the Boston public schools (Chauncey & Dobbin, 1963). Following this uniform written examination, formal standardized tests were introduced between 1880-1920 because of a demand for schools to justify their performance by taxpayers (Resnick & Resnick, 1985). However, some schools did not begin using standardized tests until the 1930s (Schulz, 1992). At this time, norm-referenced tests came into use (Schulz, 1992), evaluating the students' knowledge of the "basics," namely reading, writing, and arithmetic (Noori, 1993; Schulz, 1992). In addition, testing was used to address the increase in high youth unemployment and to identify the gifted

and handicapped (Resnick & Resnick, 1985).

This introduction of norm-referenced tests was created in response to the publicized use of the Army Alpha and Army Beta tests during World War I (Haney & Madaus, 1985). During this time, the Stanford Achievement Tests were also developed to assess subject areas in elementary schools (Chauncey & Dobbin, 1963). By the 1930s, the Stanford Achievement Tests were selling at the rate of one and a half million booklets per year (Haney & Madaus, 1985).

After the introduction of the Stanford Achievement Tests, another increase in standardized testing occurred during the 1950s and 1960s (Haney & Madaus, 1985) This increase was a result of federal legislation that promoted testing: the National Education Act of 1958 and the Elementary and Secondary Act of 1965 (Haney & Madaus, 1985). Even though this legislation was implemented, it was not until the 1960s and the 1970s that standardized testing became widely used in most schools (Schulz, 1992). Standardized criterion-referenced tests were also implemented during this time (Baker, 1981). Criterion-referenced tests required student to exhibit a level of performance based upon a set of tasks or criteria (Baker, 1981).

Following the implementation of criterion-referenced tests,

there was a greater demand for accountability (Resnick & Resnick, 1985). This demand created a further surge of standardized testing in the 1980s (Schulz, 1992). For this reason, testing laws were passed in thirty states by 1985; forty- seven states had mandated standardized testing by 1989-1990 (Schulz, 1992). In other words, almost every educational reform mandated testing or expanded testing procedures (Haney & Madaus, 1985).

Criticisms of Historical Assessments

As a result of the drastic increase in standardized testing, many researchers and educators felt that students were not learning because the learning process was not being enhanced (Haney & Madaus, 1985; Shepard, 1989; Shepard et al., 1994; Worthen & Spandel, 1991). In other words, critics believed that measurement-driven instruction distorted the curriculum by narrowing it, causing it to stagnate (Herman, 1992; Kirst, 1991; Shepard, 1991; Shepard et al., 1994). As a result, instruction on tested skills began to resemble the format of multiple choice tests, with students learning to recognize correct answers rather than generating their own problem-solutions (Kirst, 1991; Noori, 1993; Shepard, 1989; Shepard et al., 1994). The school day was also rigidly structured with reading,

math, and language being taught as separate entities (Boidy & Moran, 1994; Shepard,1991). Teachers taught these subjects using practice materials and worksheets that resembled the tests (Kirst, 1991; Shepard, 1989; Shepard, 1991; Shepard et al., 1994). Therefore, the daily mode of instruction was composed of repeated drills on isolated skills (Kirst, 1991; Noori, 1993; Shepard et al., 1994). Meanwhile, other subject areas such as social studies, science, art, and music were ignored because they were not tested (Kirst, 1991; Shepard et al., 1994).

Since standardized testing did not enhance the learning process and promote instruction in all subject areas, it did not allow students to relate prior knowledge to instruction (Noori, 1992; Schulz, 1992). This denied students opportunities to develop thinking and problem-solving skills (Shepard, 1991) because the vast majority of the test items were lower-level knowledge (Schulz, 1992). For this reason, a decline in higher order thinking skills was created (Shepard, 1991). This was evidenced by the decline in these thinking skills on the National Assessment of Educational Progress during the 1980s and by the failure of accountability test score results to generalize when students were retested using less familiar formats (Shepard, 1991).

Another dilemma with standardized tests was the inadequacy in measuring individual student success (Paris et al., 1992; Schulz, 1992; Worthen & Spandel, 1991). Standardized tests categorized and labeled students according to their performances on the tests (Schulz, 1992; Shepard et al., 1994; Worthen & Spandel, 1991). For example, these tests were sometimes used as a means of excluding children from regular education (Worthen & Spandel, 1991). This meant that students who were not successful on standardized tests were rejected, referred to special education, repeated a grade, or dropped out of school (Shepard et al., 1994). In other instances, these students would be placed in the lowest tracks and were more apt to experience instruction geared only to multiple choice tests (Schulz, 1992). As a result, they were denied the opportunity to develop thinking skills required for jobs of the future (Schulz, 1992).

For these reasons, many researchers believed that standardized tests were racially, culturally, and socially biased (Haney & Madaus, 1985; Schulz, 1992; Worthen & Spandel, 1991). They believed these tests favored economically and socially advantaged children. In addition, these tests did not take into account the full range of the students' cultural and social background (Haney & Madaus, 1985;

Schulz, 1992; Worthen & Spandel, 1991). This use of standardized tests as the primary criteria for decision-making in regard to student placement was careless, because it did not consider the impact that race, ethnicity, family income, and gender exerted on test scores (Worthen & Spandel, 1991).

In addition to standardized tests ignoring the impact of economic and social factors, they reduced both the professional knowledge and the status of teachers (Shepard et al., 1994). According to Shepard et al. (1994), 67% of teachers reported considerable distress because of the discord between the instructional methods they were forced to adopt and their own training and beliefs about students' learning. Therefore, test-driven instruction caused good teachers to leave the teaching profession and "de-skilled" those who remained (Shepard, 1989). Those teachers who remained aligned instruction to the test and ultimately limited their own conceptions of what should be taught (Shepard et al., 1994). Therefore, they became secure with using instructional materials that resembled the tests (Shepard, 1989). Thus, standardized tests dictated what the teachers taught as part of the schools' curriculum (Worthen & Spandel, 1991).

Characteristics of Authentic Assessment

The belief that this form of dictation is detrimental to learning created a movement toward another form of assessment: authentic assessment (Linn, Baker, & Dunbar, 1991). According to Darling-Hammond (1993), this movement is growing due to the concern that the United States' tests do not encourage more than memorization of information. In addition, an increasing number of jobs in our society require highly developed intellectual skills and technological training that consider problem-solving as a "basic" skill (Darling-Hammond, 1993; Darling-Hammond, Ancess, & Falk, 1995). As a result, students must be prepared for the jobs in our society by the educational system providing opportunities for them to develop problem-solving skills (Boidy & Moran, 1994; Darling-Hammond, 1993; Haney & Madaus, 1985; Pool & Bracey, 1992). For this reason, many researchers and educators want assessment less narrow and "more authentic" (Boidy & Moran, 1994; Davinroy, Carribeth, & Mayfield, 1994; Haines & Izard, 1994; Haney & Madaus, 1985). They believe that assessment should be linked to more realistic goals and real-life situations (Boidy & Moran, 1994; Haines & Izard, 1994; Pool & Bracey, 1992; Shepard, 1989; Shepard et al., 1994). They also

believe that authentic assessment can improve student learning (Darling-Hammond, Ancess, & Falk, 1995; Davinroy, Carribeth, & Mayfield, 1994; Haney & Madaus, 1985; Linn, Baker, & Dunbar, 1991; Shepard, 1989; Shepard et al., 1994) while providing activities that are meaningful to students (Haines & Izard, 1994; Seely, 1994; Wiggins, 1990).

However, authentic assessment is not new (Linn, Baker, & Dunbar, 1991). According to Linn, Baker, & Dunbar (1991), it has been recommended in the 1950s by Lindquist. Lindquist argued that test constructors must make items similar to the criterion series (Linn, Baker, & Dunbar, 1991). Consequently, tests must allow students to demonstrate what they have learned (Linn, Baker, & Dunbar, 1991; Shepard et al., 1994; Wiggins, 1990).

Authentic assessment permits students to demonstrate their knowledge (Hughes, 1993; Shepard, 1989; Shepard et al., 1994; Wiggins, 1990). Therefore, the term authentic assessment is intended to convey that assessment tasks are real instances of extended criterion performances rather than estimators of actual learning goals (Kirst, 1994; Shepard et al., 1994). Assessment tasks refer to activities that are meaningful to students and instructive

rather than evaluative by creating, integrating, and applying skills in meaningful contexts (Boidy & Moran, 1994; Hughes, 1993; Seely, 1994). In fact, authencity of a task has to be relevant and meaningful, which is reflected in the following statement:

> Authencity is more than face validity (Does the task look like, for example a reading task?) or a curricular validity (Is the task consistent with the manner in which it is presented in the current curriculum?). A literacy assessment task is authentic to the degree that it resembles the way literacy is used in real life. It is not enough to be consistent with curriculum, which itself maybe disconnected from real-life literacy. (Shepard et al., 1994, p. 33)

Therefore, authentic assessment can influence instruction to become more meaningful representations and a "thinking curriculum" (Davinroy, Carribeth, & Mayfield,1994). Moreover, authentic assessment refers to conveyed ideas that elicit the actual performances in which we want students to be successful (Wiggins; 1992).

For these reasons, Wiggins (1992) states that authentic assessment is (1) engaged problems and questions of importance and

substance in which students must use knowledge to construct meaning effectively and creatively (2) simulated challenges and context facing workers in a field of study or the real-life tests of adult life (3) utilized non-routine and multi-staged tasks that require background knowledge and good judgment in solving problems (4) focused on students' ability to produce a quality product and/or performance (5) involved thorough preparation, accurate self-assessment and self-adjustment by the student (6) trained assessor judgment in reference to clear and appropriate criteria (7) involved interaction between assessor and student in order for students to justify answers and respond to probing questions and (8) involved challenges where the effect of the product or performance, and sensitivity to the audience, situation, and context determine the quality of the result.

Equally important, authentic assessment is characterized by strategies and methodologies that promote outcome-based education and parallel real situations students will experience in their daily lives (Kiernan & Pyne, 1993; National Center for Effective Schools, 1991; Wiggins, 1992). In fact, authentic assessment is designed to be a representative of a student's performance (Hughes, 1993;Wiggins,

1989). It enables students to exhibit what they have learned (Hughes, 1993; Shepard et al., 1994). Therefore, strategies and methodologies enable students to engage in instructional tasks that require them to construct meaning (California Assessment Collaborative, 1993; Haines & Izard, 1992; Kirst, 1991; National Center for Effective Schools,1991; Newman & Wehlage, 1993; Wiggins, 1990). In other words, students distinguish between significant, meaningful achievement and achievement that is useless (Newman & Wehlage, 1993). Students are also required to investigate questions or "big ideas" (California Assessment Collaborative, 1993; Noori, 1993). As a result, these tasks assess learning and effort, encourage multiple modes of expressions, and support collaboration with others (California Assessment Collaborative, 1993). These tasks also promote important habits of the mind, such as self-discovery, listening skills, and cultural sensitivity (California Assessment Collaborative, 1993; Shepard, 1994) that can be measured over a period of time while incorporating a form of self-evaluation (National Center for Fair and Open Testing, 1992). This process provides feedback to the teachers and the students (Wiggins, 1992). Therefore, all instructional tasks

should have some form of feedback (California Assessment Collaborative, 1993; Shepard et al., 1994; Wiggins, 1992). Authentic assessment also assists teachers by focusing on what they need to teach and how to teach it (Lockwood, 1991). For this purpose, instructional tasks must match a scoring process in order to achieve validity and reliability by simulating real-world tests of ability (Wiggins, 1990). Moreover, the standard for these instructional tasks ought to cover a range of knowledge, skills, and habits of the mind considered important to a specific subject area (Boidy & Moran, 1994; California Assessment Collaborative, 1993). This creates a shift from a skilled-based philosophy to a higher-order thinking while providing a complete picture of the learner (Borko, Flory, & Cumbo, 1993; Davinroy, Carribeth, & Mayfield,1994; Shepard et al., 1994).

In essence, authentic assessment is designed to be a representative of students' performances in various subject areas based on scoring reliability and the logistics of testing (Wiggins, 1989; Wiggins, 1990). Therefore, assessment tasks must test exactly what has been taught. (Wiggins, 1989; Wiggins, 1990). As a result, more attention is given to teaching and learning as a criteria used in assessment (Kirst, 1994; Wiggins, 1989). Self-assessment also has a

greater role than in conventional testing (Wiggins, 1989). In addition, students are often expected to present and justify their work publicly and orally to ensure that their mastery is genuine (National Center for Effective Schools, 1991; Wiggins, 1989). Therefore, tasks and problems used in authentic assessment are complex and challenging instructional tasks that require students to think and arrive at answers or explanations (Kirst, 1991; Shepard et al., 1994). In fact, they allow students to demonstrate their habits of mind (Shepard et al., 1994).

By permitting students to demonstrate their knowledge, authentic assessment redirects efforts toward learning goals and provides numerous opportunities for students to learn (Kirst, 1991). This is evidenced in a three-year pilot project conducted by the California Assessment Collaborative. The purpose of this pilot project was to introduce a vision for a new system of assessment designed to support comprehensive school reform. For this reason, the pilot contained five dimensions: (1) articulating content standard (2) developing meaningful, fair assessments (3) building teacher capacity to use assessment to improve instruction (4) building student capacity and (5) determining and monitoring the

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consequences of assessment. Consequently, the data collection and analysis procedures were qualitative and quantitative in order to document and describe the process as well as the efforts for developing and implementing alternative assessments that incorporated authentic tasks.

For this purpose, data collection and analysis procedures included the development of Alternative Assessment Action Plans to document the project's early history and process of development. The plan described the characteristics of the schools and personnel, curriculum areas covered, description of assessment tasks, predicted outcomes, planned development activities, self-evaluation plan, and descriptions of necessary resources and costs for developing and implementing the project. These plans assisted in guiding technical assistance planning, and clarifying project goals and intended timelines.

Field notes were collected to document key issues discussed, problems raised, teacher anecdotes or strategies shared, major decisions made, and classroom observations. The field notes provided an archive of anecdotes which clarified the projects efforts. Project artifacts that included assessment samples, meeting agendas,

and field notes were also collected throughout the pilot project. Project leaders could discuss these artifacts and explain their significance. These artifacts also became crucial because they identified the project's progress, common challenges, and stumbling blocks. In addition, the project utilized focus-group interviews to access the effects of teachers' participation in developing and using the new forms of assessment.

A total of 26 focus-group interviews were conducted with 108 teachers participating. A total of 1037 comments were documented. Of these comments, 817 supported the positive impact and 220 were negative. Finally, surveys of participants were issued and collected to compare some specific challenges with the benefits associated with the assessment design and use, and to contrast the usefulness of traditional and alternative assessment for a variety of purposes (California Assessment Collaborative, 1993). Most of the questions required the participants to respond on a Likert-type scale. In this survey, 288 questionnaires were completed. The frequencies of participant's responses to each question on this scale were calculated. Open-ended comments were also coded and tallied.

Based on this data collection and analysis, the results of the

project revealed that alternative-authentic assessment can enhance opportunities for students to learn by increasing the use of performance-based instructional strategies, expanding instructional opportunities for special needs students, increasing teacher sensitivity to diversity and bias, and raising teacher expectations for student performance. Evidence also revealed that student achievement was enhanced by increasing student engagement in learning activities, increasing skills of self-assessment, and increasing students' willingness to take responsibility for their learning. In short, this project allowed educators to improve teaching and learning by utilizing alternative-authentic assessment strategies (California Assessment Collaborative, 1993).

Teaching Strategies in Authentic Assessment

In order to improve teaching and learning, authentic assessment strategies should be integrated into a school's curriculum (Noori, 1993). Therefore, the first step of this process is for teachers to know the purpose of authentic assessment (Herman, Ashbacher, & Winters, 1992). After they have acquired this knowledge, teachers need to define their learning objectives by consulting the state and local curriculum documents (Haines & Izard, 1994). Next, teachers

need to answer these series of questions in order to further develop their learning objectives: (1) What cognitive skills do the students need to develop? (2) What social and affective skills do students need to develop? (3) What metacognitive skills do they need to develop? (4) What type of problems will they need to solve? (5) What concepts and principles do students need to apply? (6) How much time will it take to develop or acquire the skills? and (7) What scoring process will be used? (Herman, Aschbacher, & Winters, 1992; Kiernan & Pyne, 1993). The answers to these questions also lead to the creation or selection of appropriate, authentic assessment tasks (Herman, Ashbacher, & Winters, 1992).

When teachers begin creating or selecting authentic tasks, they need to create meaningful tasks with time frames adjusted to meet the different learning styles, cultural backgrounds, and students' needs (Boidy & Moran, 1994; Darling-Hammond, 1993; Grady, 1994). These tasks should be designed to incorporate the following complex thinking skills: comparison, classification, analysis, decision making, problem-solving, experimental inquiry, and investigation (Boidy & Moran, 1994; Borko, Flory, & Cumbo, 1993; Grady, 1994; Haines & Izard, 1994). It is these tasks that promote higher-order thinking

skills prevalent in today's society (Boidy & Moran, 1994; Borko, Flory, & Cumbo,1993; Newman & Wehlage, 1993). Therefore, students should manipulate information through combining facts and ideas in order to synthesize, generalize, explain, hypothesize, and interpret (Newman & Wehlage, 1993). This permits authentic tasks to resemble real-life situations (Boidy & Moran, 1994; Haines & Izard, 1994; Newman & Wehlage, 1993). Furthermore, these tasks should allow students to demonstrate their acquired knowledge and skills (Kiernan & Pyne, 1993) while accepting more than one possible solution or answer (Haines & Izard, 1994). The assessment tasks should also provide opportunities for students to practice in a variety of sources and modes (California Assessment Collaborative, 1993; Grady, 1994). Finally, sufficient attention must be given to ensure that the scoring procedures are reliable and fair (Herman, Kiernan, & Pyne, 1992).

In order to insure that scoring procedures are reliable and fair, teachers need to be familiar with creating and selecting many types of assessments (Kiernan & Pyne, 1993). Journals are one example. They assist teachers in gaining an understanding of students' thought processes while monitoring their progress (Boidy & Moran, 1994;

Noori, 1993). Dialogues also allow students to learn by discussing and sharing ideas. This permits teachers to gain insight into students' thinking by listening to their conversations (Noori, 1993). Concept-mapping is a graphic representation that requires students to organize concepts and show relationships in a variety of ways (Moon & Schulman, 1995; Noori, 1993). Through drama, teachers can assess students' knowledge by using role playing, pantomiming, and movement. Creative writing utilizes research skills that require higher-order thinking skills (Noori, 1993). Portfolios are a collection of students' work that illustrate growth over a period of time (Moon & Schulman, 1995; Noori, 1993). They can also be used as a form of self-evaluation with students by permitting them to select their best work to place in the portfolios (Haney & Madaus, 1985; Moon & Schulman, 1995; Noori, 1993). In addition, graphing activities allow students to classify and make comparisons (Noori, 1993). They assist students in recognizing relationships (Noori, 1993). Essays, open-ended questions, demonstrations, exhibitions, performances are also types of assessment tasks (Herman, 1992).

Regardless of the type of assessment tasks created or selected, teachers need to be familiar with scoring authentic assessments (Hill

& Ruptic, 1994). Teachers may choose to use anedoctal records to document students' work (Moon & Schulman, 1995). Anecdotal records are narrative notes taken while observing students engaged in completing a task (Hill & Ruptic, 1994; Moon & Schulman, 1995). Teachers may also use assessment strategies that require a numerical score or rating (Moon & Schulman, 1995). However, if numerical scores are selected, teachers need to select a rating scale to illustrate different levels of mastery (Moon & Schulman, 1995). Analytic scoring is an example of numerical scoring (Hill & Ruptic, 1994; Moon & Schulman, 1995). In analytic scoring, various ratings or scores are given to certain parts of the learning tasks. All of these tasks are compiled together for the overall score. However, holistic scoring is a single numerical score that is given for the completion of a learning task. Holistic scoring requires a scoring scale known as a rubric. A rubric organizes and interprets the evidence of students' work based on a continuum of performance levels or indicators (Hill & Ruptic, 1994; Moon & Schulman, 1995).

These scoring techniques allow teachers to improve teaching by engaging in discussions with students, focusing on learning objectives and gaining a deeper understanding of students' abilities (Moon &

Schulman, 1995). Hence, educators are provided with a more complex and complete picture of the learner (Shepard et al., 1994).

Implementation of Authentic Assessment

In order to promote a more complex picture of students, schools need to advocate authentic assessment. This requires administrators, teachers, and students to alter their views of assessment (National Center for Effective Schools, 1991). Therefore, administrators should not only possess the knowledge to persuade teachers to implement assessment changes but also acquire the belief to support them (Borko, Flory, & Cumbo, 1993; Flexer, 1994). Consequently, it is necessary for administrators to be assessment literate (Arter, Stiggins, Duke, & Sagor, 1993). As a result, it is imperative that instructional leaders develop and implement standards of assessment as a part of instruction in the classroom. This means that administrators are obligated to know and recognize the characteristics of sound assessment and its usages in instructional programs. If administrators cannot recognize sound assessment, they cannot implement quality assessment. Administrators should also be familiar with how all the assessments used in their building are related to each other. They must know the

issues relating to the appropriate use of assessment, allowing them to understand and explain the significance of assessment procedures and results. Furthermore, instructional leaders ought to evaluate teachers' assessment competencies as a part of the supervision process (Arter, Stiggins, Duke, & Sagor, 1993). The acquisition of this knowledge is obtained by administrators attending training programs or inservices regarding assessment literacy. In brief, they are expected to be knowledgeable about the basic principles of sound assessment (Arter, Stiggins, Duke, & Sagor, 1993).

After administrators have become familiar with the principles of sound assessment, they must consider several implications, if they to desire to implement authentic assessment within their school building (California Assessment Collaborative, 1993). First, the implementation of sound assessment addresses the definition and purpose of teaching in regard to assessment (California Assessment Collaborative, 1993). Assessment should be used as a teacher's tool, a means to determine student outcomes and a plan for instruction (Boidy & Moran, 1994; California Assessment Collaborative, 1993; Resnick & Resnick, 1985). Therefore, administrators are required to provide teachers access to curriculum documents and the school's

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improvement plan to align their learning and teaching objectives (Lockwood, 1991). For this purpose, it is imperative that instructional leaders provide opportunities for teachers to collaborate toward developing common understandings of standards and to enhance their analysis of students' work by instructional leaders (California Assessment Collaborative, 1993). Second, the development and implementation of sound assessment must be comprehended as a complex, systemic process (California Assessment Collaborative, 1993). Assessment should go beyond setting standards, creating tasks, and scoring procedures. It should be viewed as a system of interdependent dimensions which promote attention to the consequences of assessment. As a result, administrators are expected to promote an awareness of these dimensions, while monitoring the progress of development and implementation. Next, instructional leaders must realize that sound assessments are developed in an environment of collegial inquiry. Thus, administrators ought to allow teachers time to collaborate on the analysis of students' work and share areas of common concerns. Therefore, administrators ought to provide access to facilitators and coaches for teachers in regards to authentic assessment. (California

Assessment Collaborative, 1993). This process advocates the coordinating curriculum, assessment, and professional development (California Assessment Collaborative, 1993; Lockwood, 1991). In addition, equity in assessment through the creation of fair and unbiased tasks must be considered (California Assessment Collaborative, 1993).

This allows all students an opportunity to learn (Darling-Hammond, 1993). For this purpose, instructional leaders must ensure that all students have access to a thinking curriculum (Davinroy, Carribeth, & Mayfield, 1994). Hence, administrators should evaluate assessment and instructional materials. In addition, they should structure their schools to provide teachers and students with opportunities to improve their work (California Assessment Collaborative, 1993). Finally, instructional leaders must consider assessment development and implementation as a means of defining the purpose of education (California Assessment Collaborative, 1993; Resnick & Resnick, 1985; Schulz, 1992). By taken this into consideration, instructional leaders should recognize that teachers are an important part of assessment development and implementation (California Assessment Collaborative, 1993;

Lockwood, 1991; Worthen, 1993) and must be permitted to explore the role of assessment in instruction (California Assessment Collaborative, 1993; Worthen, 1993).

Since teachers play a vital role in assessment development and implementation, administrators should gauge several conditions before deciding whether their school is ready for alternative assessment (Worthen, 1993). Primarily, there must be a desire for better assessment within the school. This process may stipulate a variety of techniques to address assessment paradigms to induce fundamental change (Schwager, 1995). This procedure may create a basis to address specific learning and assessment problems. If dissatisfaction is revealed and an openness for innovation is present, instructional leaders may precede to the next step. The next step is to assess the availability to staff development concerning alternative assessment. Administrators may need to determine if staff development is available within their district or state. If it is not available, they may need to find an expert in the field of authentic assessment outside the state. This requires the funds to pay that individual as a presenter. Therefore, money must be available to provide staff development (Worthen, 1993). This is mandatory

because staff development creates clear ideas about assessment and learning (Lockwood, 1991). As a result, the teachers will develop assessment literacy (Stiggins, 1991).

After the availability of staff development has been considered, administrators must address the issue of student outcomes and accomplishments. When addressing student outcomes, the curriculum may need to be revised to lend itself to non-traditional assessments. To revise the curriculum, teachers will need access to examples of alternative assessment. Therefore, instructional leaders must provide the school's professional library with various books and journals that identify non-traditional assessments. Administrators should also analyze the school's budget to determine if funds are available to purchase these materials. Furthermore, instructional leaders must survey whether or not parents are receptive to a change in current assessment practices. If the parents are receptive, administrators need to develop a plan to address their beliefs about assessment and advocate the change toward authentic assessment (Worthen, 1993).

Once administrators have gauged these conditions, they must precede in developing a consensus that student achievement will

improve with the implementation of authentic assessment and establish the school's mission toward assessment (Lockwood, 1991). Following the development of the school's mission, administrators must assist the school in designing a specific plan to transform current assessment practices (Lockwood, 1991). Hence, instructional activities, tests, and projects should be developed to include higher level thinking skills that simulate real-life situations (Boidy & Moran, 1994; Haines & Izard, 1994; Shepard et al., 1994). Moreover, intensive staff development must be provided by administrators to ensure a positive effect on the implementation of authentic assessment (Borko, Flory, & Cumbo, 1993; Johnson, 1992).

Intensive and early staff development is crucial and imperative in implementing authentic assessment (Worthen, 1993). This is evidenced in a case study conducted in a junior high school in Iowa (Johnson, 1992). The purpose of this study was to examine the factors and effect of professional development paradigm on the implementation of authentic assessment. The data in this study was collected from several questionnaires. Staff of Concern questionnaires were issued to 51 teachers in the fall and 50 teachers in the spring. Levels of Use interviews were conducted with 50

teachers to document their usage of authentic assessment and the effect of staff development on the implementation of authentic assessment. Forty teachers completed a staff development survey questionnaires that required them to share the successes of professional development. Implementation Analysis Survey questionnaires required teachers to identify the stressful issues of implementation (Johnson, 1992).

After these questionnaires were given, they were analyzed. This analysis revealed that 70% of teachers indicated that professional development paradigm assisted in the successful implementation of authentic assessment. Therefore, staff development was crucial and imperative in implementing authentic assessment (Johnson, 1992).

After early staff development has been provided, administrators and teachers are ready to proceed with the assessment development process (Herman, Aschbacher, & Winters, 1992). According to Lockwood (1991), this process includes the following steps: (1) specifying the nature of the skills and accomplishments students are to develop (2) specifying illustrative tasks that would require students to demonstrate these skills and

accomplishments (3) specifying the standards for evaluation (4) developing a rating process (5) gathering evidence of validity to illustrate kinds of inferences that can be made from the assessment and (6) using test results to refine assessment and improve curriculum as well as provide feedback to students, parents, and the community. This process is time consuming. As a result, the culmination of the implementation of authentic assessment into a school's curriculum may be a four-year process (Lockwood, 1991). These reasons are why administrators, teachers, and students must be firmly committed to making changes and improvements in assessment.

Recommendations

In order to advocate improvements in assessment, several recommendations were suggested in this paper to assist administrators in this endeavor. The recommendations were based on the review of related literature, discussions with colleagues in Fort Worth Independent School District and the Region XI Educational Service Center, and personal observations during the first author's career development of eight years in the classroom and one year in administration.

Related Literature. According to the review of related literature, authentic assessment will improve education. Consequently, the first author suggests that administrators and faculty members continue to research how authentic assessment improves teaching and learning, particularly as the first step of implementation. This can create the rationale and desire for changes in assessment practices. As noted in the literary review, once this desire for change has been created, adequate staff development and resources must be available. The staff development should be extensive. According to the California Assessment Collaborative (1993), the developmental sessions should walk administrators and teachers through the process of identifying, recognizing, and creating authentic tasks that are reliable and fair. Since this is a lengthy process, it is recommended that a year be devoted exclusively to staff development (California Assessment Collaborative, 1993; Lockwood, 1991). Meanwhile, administrators should begin purchasing resources and materials that advocate and assist in the development of authentic tasks. For example, journals and books should be purchased to illustrate research and examples of authentic assessment tasks (California Assessment Collaborative, 1993).

After staff development has been provided and resources purchased, instructional leaders must allocate time for teachers to plan, create, and critique authentic tasks (California Assessment Collaborative 1993; Lockwood, 1991). This may require creative scheduling. However, it promotes the development of quality assessment, as acknowledged by the California Assessment Collaborative (1993) and Stiggins (1991) in the literature review. In addition, teachers must be allowed time to share their successes and concerns with other teachers (California Assessment Collaborative, 1993; Lockwood, 1991; Worthen, 1993). In other words, it is important that administrators advocate collaboration (Lockwood, 1991). Through collaboration, teachers gain further insight into implementing authentic assessment (Worthen, 1993).

The implementation of authentic assessment should also incorporate parental and community support (Lockwood, 1991). The instructional leaders and teachers must work cooperatively to assist parents and the community in redefining their philosophy of assessment (California Assessment Collaborative, 1993; Lockwood, 1991; Worthen, 1993). Moreover, parents and members of the community ought to participate in the process of developing

authentic tasks (California Assessment Collaborative, 1993). For instance, some tasks may be designed to include parental and community involvement. This inclusion permits them to have an active role in the learning process (Darling-Hammond, 1993). In order to gain more insight into the learning process of authentic assessment and compile recommendations for administrators, there were several discussions conducted with various colleagues.

Discussions with Colleagues. From the first author's discussions with colleagues in the Fort Worth Independent School District (FWISD) and the Region IX Educational Service Center, this author has found that my colleagues feel that authentic assessment is one of the "best instructional practices" to enhance learning. The first author began discussions by speaking with Teresa Stegall from Research and Evaluation in FWISD. She shared that the Texas Education Agency (TEA) was advocating some forms of alternative assessments in regards to the Texas Assessment of Academic Skills (TAAS) for special education, bilingual, and English as a second language (ESL) students. For example, she explained that portfolios are recommended as one form of an alternative assessment for special education students that are exempt from TAAS. In addition to these

recommended changes by TEA, Ms. Stegall stated that the instructional practices used in authentic assessment are currently being promoted and advocated in today's educational system. In other words, there is a movement to advocate authentic assessment, because it promotes higher-order thinking skills and addresses the entire learning process. Therefore, Ms. Stegall recommended that before a school begins implementation of authentic assessment, the school needs to study the feasibility of implementation by reading scholarly journals, books, case studies, and attending seminars addressing authentic assessment. She also informed me that parents must be included in this process because they are also required to change their traditional beliefs about assessment.

After the discussion with Ms. Stegall, the first author conversed with Mrs. Kathy Wright-Chapman from the Region IX Service Center. In the discussion with Mrs. Wright-Chapman, she stated that if a school is currently not doing well with TAAS, the school should not venture into authentic assessment yet. She informed the first author that this was important because the school personnel have to possess a deep understanding of the TAAS objectives and the TEA's essential elements in order to incorporate them into authentic tasks. However,

Mrs. Wright-Chapman claimed that while a school was working toward the deeper understanding of TAAS, the school could began studying authentic assessment by creating study groups. The study groups would research and periodically report on implementing authentic assessment. Mrs. Wright-Chapman also remarked that a school could begin developing authentic tasks by using professional portfolios for the staff and teachers. Once the teachers become familiar with portfolios, student portfolios can be introduced. Furthermore, she stated that the teachers and parents should participate in site-visits to school campuses that are currently using authentic assessment. This allows them to view authentic assessment first-hand and see how it is utilized for teachers and students. Mrs. Wright-Chapman shared that schools can use the Elementary Next Door Network to access Mentor Schools using authentic assessment in the state of Texas. According to Mrs. Wright-Chapman, Benbrook Elementary in FWISD is listed as a Mentor School. Glenrose Elementary in Glenrose, Texas is also listed as a Mentor School. By accessing these schools, site-visits can be scheduled or arranged.

Following this conversation, the first author decided to talk to

Jayne John, the Co-Director of Alice Carlson Applied Learning Center in FWISD. Ms. John informed the first author that the teachers at Alice Carlson are not using paper and pencil tasks. They are developing portfolios, anecdotal records, and narratives to document students' progress and growth. The narratives, used at Alice Carlson, have even replaced the traditional report cards as a means of evaluation. Furthermore, the teachers are constantly incorporating higher-level thinking skills into their daily instruction by creating tasks that require students to do more than rote memorization. For these reasons, Ms. John recommended that schools interested in implementing authentic assessment should begin by dividing the faculty into working groups that would collaborative on deciding the first steps of implementation. According to Ms. John, the groups will identify that they need staff development or training. Therefore, she stated that a year should be dedicated entirely to staff development. Following this staff development, she said that the school's faculty and staff should collaboratively reach a decision on the actual implementation plan. Moreover, the implementation plan should include scoring, self-assessment, and opportunities to critique and revise the plan, as needed. In addition, Ms. John remarked that

parents are an important part of implementation. She believes that parent forums should be conducted in the first stages to familiarize the parents with authentic assessment. These forums should compare traditional assessment with authentic assessment. Parents should also be permitted to participate in site-visits of campuses currently using authentic assessment. Furthermore, Ms. John believes parents should be a part of the goal-setting conferences for students. This parental participation will allow parents to feel comfortable with the changes in assessment.

After talking to Ms. John, the first author wanted to get the opinion of a classroom teacher currently using authentic practices. For this reason, the first author talked to Mrs. Regina Woods, a kindergarten-first grade teacher at Alice Carlson Applied Learning Center. Mrs. Woods has been a teacher at Alice Carlson for four years. In my discussion with her, she stated that in order for a school to embrace authentic assessment, teachers must have access to lots of resources. Teachers need to have examples of authentic tasks. In addition, she believes that administrators should set aside time for teachers to discuss, as a group or as a grade level, and share their successes and concerns. In these meetings, teachers would

generate possible solutions to their problems. Moreover, she stated that they should be mentor teachers to further assist teachers in the implementation process. Mrs. Woods also explained that site-visits to campuses that are using authentic assessment are essential. The visits allow teachers to bring back ideas or suggestions to use in their buildings.

At this point, the first author asked Mrs. Woods about the challenges with parents. She responded that there was some resistance to change by the parents at Alice Carlson. However, parent forums were conducted to show the parents the school's goals and why the goals were important. For this reason, Mrs. Woods highly recommended a research team be developed for any school interested in implementing authentic assessment. The research team would conduct surveys of the parents and analyze the parents' views toward any changes in assessment. In addition, the team could also monitor parents' acceptance toward authentic assessment once the implementation plan had begun. After the discussion with Mrs. Woods, the first author began to reflect upon her own experiences concerning any changes in instruction or assessment within her career development.

Early Career Development in the Classroom and Administration.

From the first author's observations as a former classroom teacher for eight years and a one-year administrator, it is very difficult to initiate any changes in instruction and assessment. The first author has observed that many teachers feel that they are constantly bombarded with changes from the latest trends. Therefore, they halfheartedly embrace the changes with the hope that they will "fizzle out" from lack of cooperation or follow-through.

With this reality in mind, the both authors believe it is imperative for administrators to receive support from the teachers before implementing any assessment changes. Furthermore, teachers must feel that they have a personal stake in this process and that it will improve education. For this reason, we highly recommends that this implementation process be developed collaboratively. We believe the school should reach a consensus on why assessment changes are needed. In order to assess their needs, study groups may need to be formed to research traditional and non-traditional assessment. Following the study groups, extensive staff development must be provided.

The staff development should include site-visits for 4 years to

school campuses currently using authentic assessment. After staff development has been provided, an implementation plan ought to be developed collaboratively between the teachers and administrators. Through this collaboration, teachers may be convinced that authentic assessment is not a trend or fad, and that it will be implemented into the school's curriculum for years.

Collaboration will also permit the teachers to view each other as resources for professional growth by offering suggestions and ideas. Furthermore, the teachers will begin to realize that they are responsible for incorporating authentic tasks into the instructional process through collaboration. They can also feel accountable for its outcome.

Equally as important, teachers must feel that their administrators are instructional leaders. Administrators cannot promote a change in assessment practices unless they are familiar with various types of assessment. For this purpose, administrators must attend staff development with their teachers to learn how to create, identify, and critique authentic tasks. This knowledge is imperative, because it allows administrators, as instructional leaders, to conduct classroom demonstrations for teachers, especially those

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who are experiencing difficulties. Following these demonstrations, administrators would be able to explain to teachers the process of selecting, creating, and using authentic assessments in the classroom.

By allowing teachers to view these demonstrations, both authors feel that the teachers can begin to see the administrator as an instructional leader and began to develop more confidence in them. The teachers would also view administrators as another resource person when they need assistance in developing authentic tasks. As a result, a collaborative school climate will be developed to implement these important changes in assessment.

CONCLUSIONS

The pressures of accountability for high test scores on standardized tests is constantly increasing. In almost every state, there is some form of a standardized test in use. Therefore, administrators and teachers have a tendency to aim for high test scores. In this process, they tend to limit the curriculum and gear instruction to resemble the standardized tests. In addition, many subject areas are still frequently taught isolation by using drill and practice, and rote memorization. As a result, limited attention is being given to the learning process or higher-order thinking skills.

For this reason, school personnel should advocate authentic assessment on a more consistent basis. Authentic assessment links assessment to real-life situations by providing activities and tasks that are significant and meaningful to students. In other words, it promotes critical thinking skills by permitting students to use prior and new knowledge to exhibit what they have learned. Authentic assessment also encourages multiple modes of expressions and supports collaboration.

In order to advocate these types of authentic assessment and encourage multiple modes of expressions, school personnel must develop an implementation plan. This plan should be developed collaboratively by administrators and teachers. However, before this plan can be developed, the teachers must reach a consensus on why assessment changes are needed. Therefore, study groups composed of teachers should be formed to research authentic assessment by reading scholarly journals, books, and case studies. In addition, these groups should attend seminars and site-visits at school campuses that are currently using authentic practices. After the groups have conducted this research and attended site-visits, they should present reports to all the teachers and administrators stating their findings

on the learning outcomes. Hopefully, these findings will lead the teachers and administrators to understand why changes are needed in assessment.

Following the acknowledgement for assessment changes, intensive staff development must be provided. This staff development should include how to create, select, implement, and score authentic tasks. After each staff development, administrators and teachers should collaboratively develop a school-wide implementation plan that includes the stages and steps for implementing relevant assessment changes.

The key to the development of these assessment changes is collaborative decision-making. This collaboration promotes a collaborative school environment. In schools where a collaborative approach is advocated, teachers learn to view each other as resources for professional growth and work together with administrators toward common instructional goals. Teachers also have the freedom to work with other teachers in experimenting with alternative assessment practices and procedures. Moreover, the teachers begin to believe that the quality of education is largely determined by what happens at the school site. As a result, the teachers start to feel

responsible for the instructional process of implementing authentic assessment and accountable for its outcome in a collaborative school climate.

Within a collaborative school advocating changes in assessment, the administrators' role is to assist teachers in building collaborative skills while ensuring ongoing, supportive staff development. Hence, administrators can assist teachers in learning to monitor their collegial progress, taking responsibility for mentor activities, and developing cooperative learning skills. Administrators can develop cooperative structures (e.g. teams, study groups,and support groups) that lead teachers to work as a team and work together to achieve the school-wide goal of implementing authentic assessment. Without this teamwork, it is impossible to implement any consistent changes in assessment strategies.

This teamwork concept can create the ideal or visionary school for the year of 2000. In this school, administrators, teachers, and students would participate in setting school-level goals. Therefore, an atmosphere conducive to learning that included high expectations for teachers and students would be established. Moreover, administrators would supervise curriculum and teaching by actively

assisting and engaging teachers in the process of school transformation. In addition, instructional leaders would engage in effective communication practices by actively listening to teachers, parents, and students and by providing effective, ongoing feedback. As a result, a school culture that emphasizes risk-taking will lead to innovation and the use of innovative classroom teaching and learning practices.

REFERENCES

Arter, J. A., Stiggins, R. J., Duke, D., & Sagor, R. (1993). Promoting assessment literacy among principals. NASSP Bulletin, 77(556), 1-7.

Baker, E. (1981). Tests and instruction: An historical overview (Report No. TM-820-280). New York: National Institution of Education. (ERIC Document Reproduction Service No. ED 243 891)

Boidy, T., & Morgan, M. (1994). Improving students transfer of learning among subject areas through the use of an integrated curriculum and alternative assessment (Report No. PS-022-720). Wheeling, IL: Saint Xavier University. (ERIC Document Reproduction Service No. ED 376 943)

Borko, H., Flory, M., & Cumbo, K. (1993). Teachers' ideas and practices about assessment and instruction: A case study of the effects of alternative assessment in instruction, student learning, and accountability practices (Report No. TM-022-595). Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 378 226)

California Assessment Collaborative (1993). Charting the course toward instructionally sound assessment: A report of the alternative assessment pilot project (Report No. TM-021-993). Sacramento, CA: California State Department of Education. (ERIC Document Reproduction Service No. ED 373 098)

Chauncey, H., & Dobbing, J. E. (1963). Testing: Its place in education today. New York: Harper & Row.

Darling-Hammond, L. (1993). Setting standards for students: The case for authentic assessment. NASSP Bulletin, 77(556), 18-26.

Darling-Hammond, L., Ancess, J., & Falk, B. (1995). Authentic assessment in action: Studies of schools and student. New York: Teachers College Press.

Davinroy, K., Carribeth, L., & Mayfield, V. (1994). Second report on case study of the effects of alternative assessment in instruction (Report No. TM-022-748). Washington, DC: Office of Education Research and Improvement. (ERIC Document Reproduction Service No. ED 379 353)

Ebel, R. L. (1977). The uses of standardized testing (Report No. TM-006-359). Bloomington, IN: Phi Delta Kappa Education Foundation. (ERIC Document Reproduction Service No. ED 142 567)

Flexer, R. (1994). How "messing about" with performance assessment affects what happens in classrooms (Report No. TM-022-748). Washington, D.C: Office of Educational Research and Improvement. (ERIC Document Reproductions Service No. ED 379 353)

Grady, J. B. (1994). Authentic assessment and tasks: Helping students demonstrate their abilities. NASSP Bulletin, 78(566), 92-98.

Haines, C., & Izard, J. (1994). Assessing mathematical communications about projects and investigation. Educational Studies in Mathematics, 27, 373-386.

Haney, W., & Madaus, G. (1985). Searching, for alternatives to standardized test: Whys, whats, and whithers. Phi Delta Kappan, 70(9), 683-685.

Herman, J. (1992). What's happening with educational assessment? (Report No. TM-019-067). Los Angeles: National Center on Evaluation, Standards, and Student Testing. (ERIC Document Reproduction Service No. ED 349 342)

Herman, J. L., Ashbacher, P. R., & Winters, L. (1992). A practical guide to alternative assessment. Los Angeles: Regents of the University of California.

Hill, B., & Ruptic, C. (1994). Practical aspects of authentic assessment: Putting the pieces together. Norwood, MA: Christopher-Gordon.

Hughes, S. (1993). What is alternative/authentic assessment and how does it impact special education? Educational Horizon, 72(1), 28-35.

Johnson, A. W. (1992). A case study of a midwestern high school using Joyce's model to implement a complex school improvement innovation: Authentic assessment (staff development) (Doctoral dissertation, Iowa State University, 1991). Dissertation Abstracts International, 53, 361.

Kiernan, H., & Pyne, J. (1993). Measuring student performance: Assessment in social studies (Report No. SO-024-326). River Edge, NJ: New Jersey Council for the Social Studies. (ERIC Document Reproduction Service No. ED 373 010)

Kirst, M. (1991). Interview on assessment issues with Lorrie Shepard. Educational Researcher, 20(2), 21-27.

Linn, R., Baker, E., & Dunbar, S. (1991). Complex, performance-based assessment: Expectations and validation criteria. Educational Researcher, 20(8), 15-21.

Livingston, C., Castle, S., & Nation, J. (1994). Testing and curriculum: One school's experience. Educational Leadership, 46(7), 23-25.

Lockwood, A. T. (1991, March). From telling to coaching. Focus in Change, 3(1), pp.3-7.

Meyer, C. (1992). What's the difference between authentic and performance assessment. Educational Leadership, 49(8), 39-40.

Moon, J., & Schulman, L. (1995). Finding the connections: Linking assessment, instruction, and curriculum in elementary mathematics. Portsmouth, NH: Heinemann.

National Center for Fair and Open Testing. (1992). K-12 testing fact sheet (Report TM-019-267). Cambridge, MA: National Center for Fair and Open Testing. (ERIC Document Reproduction Service No. ED 357 376)

National Center of Effective Schools. (1991, March). Authentic assessment. Focus in Change, 3(1), p.1.

Newman, F. M., & Wehlage, G. G. (1993). Five standards of authentic instruction. Educational Leadership, 50(7), 8-12.

Noori, K. (1993). Authentic assessment in elementary science (Report No. SE-054-298). Tuskegee, AL: Tuskegee University. (ERIC Document Reproduction Service No. ED 368 564)

Paris, S. G., Calfee, R. C., Filby, N., Hiebert, E. H., Pearson, P. D., Valencia, S. W., & Wolf, K. P. (1992). A framework for authentic literacy assessment. The Reading Teacher, 46(2), 88-98.

Pool, C., & Bracey, G. W. (1990). Making sense of authentic assessment. Instructor, 102(4), 40-42.

Resnick, D., & Resnick, L. (1985). Standards, curriculum, and performance: A historical and comparative perspective. Educational Researcher, 14(2), 5-20.

Schulz, E. (1992). Enemy of innovation: Our obsession with standardized testing is impeding reform. Teacher Magazine, 2(2), 25-31.

Schwager, M. T. (1995). Paradigms of assessment: What is authentic assessment in your world view? (Doctoral dissertation, University of California, 1994). Dissertation Abstracts International, 55, 3792.

Seely, A. E. (1994). Professional's guide to portfolio assessment. Westminster, CA: Teacher Created Materials.

Shepard, L. (1989). Why we need better assessments. Educational Leadership, 46(7), 4-9.

Shepard., L. (1991). Will national tests improve student learning? Phi Delta Kappan, 72, 232-238.

Shepard, L., Flexer, R., Hiebert, E., Marion, S., Mayfield, V., & Weston, T. (1994). Second report on case study of the effects of alternative assessment in instruction (Report No. TM-022-748). Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 379 353)

Stiggins, R. J. (1995). Assessment literacy for the 21st century. Phi Delta Kappan, 77, 238-246.

Sugarman, J., Allen, J., & Keller-Cogan, M. (1993). How to make authentic assessment work for you. Instructor, 103(1), 66-70.

Wiggins, G. (1989). Teaching to the authentic test. Educational Leadership, 46(7), 42-46.

Wiggins, G. (1990). The case for authentic assessment (Report No. TM-016-142). Washington, DC: American Institutes for Research. (ERIC Document Reproduction Service No. ED 328 611)

Wiggins, G. (1992). Designing effective and authentic assessment tasks: Guidelines, principles and tools. New York: Class.

Worthen, B. R. (1993). Critical issues that will determine the

future of alternative assessment. Phi Delta Kappan, 74(6), 444-454.

Worthen, B. R., & Spandel, V. (1991). Putting the standardized test debate in perspective. Educational Leadership, 48(5), 65-69.

ADDITIONAL BIBLIOGRAPHY

Darling-Hammond, L., & Falk, B. (1997). Using standards and assessments to support student learning. Phi Delta Kappan, 79(3), 190-199.

Hart, D. (1994). Authentic assessment. A handbook for educators. Menlo Park, CA: Addison-Wesley.

Jones, K.,& Whitford, B.L. (1997). Kentucky's conflicting reform principles: High-stakes school accountability and student performance assessment. Phi Delta Kappan, 79(4), 276-281.

Kubibzyn, T., & Borich, G. (1996). Educational testing and measurement. Classroom application and practice (5th ed.). New York: Harper Collins.

McDaniel, E. (1994). Understanding education measurement. Madison, WI: WCB Brown Benchmark.

Mindes, G., Ireton, H., & Mardell-Czudnowski, C. (1996). Assessing young children. New York: Delmar.

Oosterhof, A. (1996). Developing and using classroom assessments. Englewood Cliffs, NJ: Prentice-Hall.

Puckett, M. B., & Black, J. K. (1994). Authentic assessment of the young child. Columbus, OH: Merrill.

Tanner, D. (1998). The social consequences of bad research. Phi Delta Kappan, 79(4), 276-281.

Tierney, R. J. , Caster, M. A., & Desal, L. E. (1991). Portfolio assessment in the reading-writing classroom. Norwood, MA: Christopher-Gordon.

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